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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/759,498	01/12/2001	Phillip W. Barnett	6874-105 / 10024998	2476

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EXAMINER
EHICHIOYA, FRED I

ART UNIT	PAPER NUMBER
2169	

MAIL DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
Office Action Summary	09/759,498	BARNETT ET AL.
	Examiner	Art Unit	
	FRED I. EHICHIOYA	2169	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS,
WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>25 April 2008</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>139 - 158</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>139 - 158</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

1.   In view of the communication filed on April 25, 2008, PROSECUTION IS

HEREBY REOPENED. A new ground of rejection is set forth below.

       To avoid abandonment of the application, appellant must exercise one of the

following two options:

       (1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply

under 37 CFR 1.113 (if this Office action is final); or,

       (2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed

by an appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and

appeal brief fee can be applied to the new appeal. If, however, the appeal fees set forth

in 37 CFR 41.20 have been increased since they were previously paid, then appellant

must pay the difference between the increased fees and the amount previously paid.

Claim Rejections - 35 USC § 101

2.   Amendment to claim 139 submitted April 25, 2008 overcomes the rejection of

claims 138 - 158 under 35 U.S.C. 101 of Office Action mailed February 22, 2008.

Claim Rejections - 35 USC § 102

3.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by
another filed in the United States before the invention by the applicant for patent or (2) a patent
granted on an application for patent by another filed in the United States before the invention by the

applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claim 139 is rejected under 35 U.S.C. 102(e) as being anticipated by US Patent

No. 6,510,406 issued to Giovanni B. Marchisio (Hereinafter "Marchisio").

Regarding claim 139, Marchisio teaches a computerized tool for use on a

computer apparatus having input interfaces for receiving information, a memory for

storing information and a user interface, configured for facilitating forward looking

strategic analyses of a collection of technical documents each having a searchable text

and associated bibliographic information including a source and a date, comprising the

computer-assisted steps (i.e., at step 7 of FIG. 1, the disclosed system generates an

auxiliary data structure associated with the previously generated concept identification

numbers. The elements of the auxiliary data structure generated during step 7 are used

to store the relative positions of each term of the term-document matrix within the

electronic information files in which the term occurs. Additionally, the auxiliary data

structure may be used to store the relative positions of tag information from the

electronic information files, such as date information, that may be contained in the

headers of any HTML and XML files; [5]).

Marchisio teaches performing a first search to identify a subset (second

collection) of documents focused on a particular field (i.e., the key to successful

semantic retrieval is to select a subspace where documents 54 which contain the

keyword "Shakespeare" cluster as a subset of all documents 56 which deal with the

topic of "THEATER"; [31]).

Marchisio teaches identifying those documents in the subset relevant to each of

"m" "actions" (i.e., see FIG. 4 and FIG. 5)

Marchisio teaches identifying those documents in the subset relevant to each of

"n" "objects" (i.e., see FIG. 4 and 5).

Marchisio teaches combining each of the "m" actions with each of the "n" objects

to construct an "m" x "n" array of "cells", such that each of the cells is associated only

with the documents in said subset that were identified as relevant both to the respective

action and to the respective object (i.e., FIG. 5 shows clustering for the document

collection reflected by the table of FIG. 4, as obtained using an LSI approach, as in

some existing systems. The dots in each of the graphs in FIG. 5 are plane projections of

individual documents into "concept space", as determined by a choice of the first few

eigenvectors. Documents which deal with similar topics cluster together in this space.

The key to successful semantic retrieval is to select a subspace where documents 54

which contain the keyword "Shakespeare" cluster as a subset of all documents 56

which deal with the topic of "THEATER". This is the case for the two projections shown

by the graphs 50 and 52, but not for graphs 51 and 53. Graphs 51 and 53 in FIG. 5 are

examples where the "SHAKESPEARE" documents 54 do not appear as a subcluster of

the "THEATER" documents 56. Graphs 50 and 52, on the other hand, are examples

where the "SHAKESPEARE" documents 54 appear as a subcluster of the "THEATER"

documents 56. It is difficult to predetermine which choice of projection axes x-y that will

cause the desired effect of clustering the "SHAKESPEARE" documents as a subcluster

of the "THEATER" documents. More specifically, it is difficult to predetermine how many

eigenvectors--and which ones--one should use with LSI in order to achieve this result.

FIG. 5 illustrates that there is no way of pre-determining the combination of axes which

cause the "SHAKESPEARE" documents to appear as a subcluster of the "THEATER"

documents; [31]. Furthermore, where D is an m X n term-document matrix, q is a query

vector with m elements; the set of basis functions .omega. is m X k and its columns are

a dictionary of basis functions [.omega..sub.j, j=1,2, . . . ,k<n]; [34]).

Marchisio teaches applying at least two scoring metrics to the bibliographic data

for the documents associated with each of the cells, at least one of the scoring metrics

including a time weighted predictive factor (i.e., weighting of the term-document matrix

formed at step 6 may be performed as illustrated at step 8 of FIG. 1. Weighting of the

elements of the term-document matrix performed at step 8 may reflect absolute term

frequency count, or any of several other measures of term distributions that combine

local weighting of a matrix element with a global entropy weight for a term across the

document collection, such as inverse document frequency; [6])

Marchisio teaches generating a graph showing each of the applied scoring

metrics for each of the array cells (i.e., see FIG. 5 and FIG. 6).

Claim Rejections - 35 USC § 103

4.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

5.   Claims 140 - 158 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Marchisio in view of USPN 5,991,751 issued to Kevin G. Rivette et al (hereinafter

"Rivette").

     Regarding claims 140, Marchisio disclosed the claimed subject matter as discussed

in claim 139. Marchisio does not explicitly teach the actions and objects include specific

instances of categories as claimed.

     Rivette teaches the actions and objects include specific instances of categories

selected from the group consisting essentially of products, services, production

methods, production applications, technologies, technological applications, chemical

compounds, chemical indications, inventors, assignees, forward citations to a key

reference, backward citations to a key reference, and combinations thereof (see column

17, lines 55 – 67 and column 85, lines 52 – 67).

     It would have been obvious to one of ordinary skill in the art at the time the

was made to combine teaching of Rivette with the teaching of Marchisio wherein the

actions and objects which include specific instances of categories are used in analyzing

patents. The motivation is that patent citation identifies source patents and citing

patents for reference purposes.

Regarding claim 141, Rivette teaches wherein the documents include both

issued patents and not yet issued patent applications (see column 102, lines 56 – 67).

Regarding claim 142, Rivette teaches wherein the source information includes

patent assignees (see column 17, lines 55 – 67).

Regarding claim 143, Rivette teaches wherein the date information includes a

filing date (see column 17, lines 55 – 67).

Regarding claim 144, Rivette teaches wherein the date information also includes

an issue date for the issued patents (see column 17, lines 55 – 67).

Regarding claim 145, Rivette teaches wherein one of the scoring metrics

includes an innovation measure which takes into account changes of patent activity

over time (see Fig. 66 and column 107, lines 24 – 48).

Regarding claim 146, Rivette teaches wherein one of the scoring metrics

includes a recent innovation measure which takes into recently filed patent applications

(see column 102, lines 61 – 65).

Regarding claim 147, Rivette teaches wherein one of the scoring metrics includes a measure of the relative position of a particular assignee within a particular cell (see Figs. 118 and 122).

Regarding claim 148, Rivette teaches wherein each scoring metric is focused on a different assignee (see column 11, lines 15 – 32).

Regarding claim 149, Rivette teaches wherein the graph is a spider graph showing each assignee's score for a predetermined number of key cells overlaid over the corresponding scores for at least two other assignees (see Figs. 61 – 65 and column 87, lines 47 – 63).

Regarding claim 150, Rivette teaches wherein the graph displays a visual quantitative comparison for each scoring metric (see column 94, lines 53 – 55).

Regarding claim 151, Rivette teaches wherein some of the cells are grouped into "clusters", and a combined scoring metric is displayed for each cluster (see column 54, lines 31 – 49).

Regarding claim 152, Rivette teaches wherein the bibliographic source information includes the name of a subject person, organization, or event (see column 27, lines 14 – 32).

Regarding claim 153, Rivette teaches wherein the date bibliographic information includes a publication date (see column 61, lines 32 – 43).

Regarding claim 154, Rivette teaches wherein the time weighted predictive factor is based at least in part on a publication, creation, or issue date (see column 16, lines 18 – 67 and column 17, lines 1 – 67).

Regarding claim 155, Rivette teaches wherein one of the scoring metrics includes a concentration or frequency measure which takes into account distribution of the selected documents among their respective sources (see column 30, lines 60 – 65).

Regardi9ng claim 156, Rivette teaches wherein one of the scoring metrics includes a composite measure of dominance, innovation, and predictive innovation (Rivette discloses "dominance" as shown in Figs. 68 and 75; "innovation" as shown in column 102, lines 61 – 65 and "predictive innovation " as shown in column 1, lines 50 – 52).

Regarding claim 157, Rivette teaches wherein the actions and objects are crossed with a third dimension to form a three dimensional matrix (see column 25, lines 65 – 67; column 26, lines 1 – 5 and column 27, lines 51 – 67).

Regarding claim 158, Rivette teaches wherein the graph is a bar graph with each bar showing a particular scoring metric applied to a particular cell (see column 94, lines 60 – 65).

Conclusion

6.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to FRED I. EHICHIOYA whose telephone number is (571)272-4034. The examiner can normally be reached on M - F 8:00 AM to 4:30 PM.

        If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Pierre M. Vital can be reached on 571-272-4215. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

        Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

                                            /Fred I. Ehichioya/
                                            Examiner, Art Unit 2169

                                        February 20, 2009

        A Supervisory Patent Examiner (SPE) has approved of reopening prosecution by signing below:

/Pierre M. Vital/
Supervisory Patent Examiner, Art Unit 2169.